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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,194	12/07/2000	Kenneth R. Whight	PHB 34, 433	9478

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EXAMINER

ZHENG, EVA Y

ART UNIT PAPER NUMBER

2634

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/732,194

Applicant(s)

WHIGHT, KENNETH R.

Examiner

Eva Yi Zheng

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7 and 8 is/are rejected.
- 7) ☒ Claim(s) 3,6,9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to specifically label blocks 30,14,16,18,34,36,38,and 40 in Fig. 1. as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig.1, block 16 and 18. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because

- a) On line 8, word "said" should be omitted.
- b) On line 20, "Figure 2" should be deleted.

Correction is required. See MPEP § 608.01(b).

5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

"Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

6. The title of the invention has misspelled.

The following title is suggested: Multibit Spread Spectrum Signaling.

7. The disclosure is objected to because of the following informalities:

On page 5, line 9, phrase: "antenna 24" should be --antenna 20--.

Appropriate correction is required.

### ***Claim Objection***

8. Claims 3-6, and 9-10 are objected to because of the following informalities: on line 1, recitation: " characterised in" should be changed to --characterized wherein--.
- Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 4, and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) Regarding claim 4, the recitation "a moving average" is indefinite and unclear to what it refers to since moving average is usually regarding to a group of data.
- b) Claim 5 recites the limitation "the running average". There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects

for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 2, 7, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakoda et al. (US 6,519,292).

a) Regarding claim 1, as shown in Fig. 6, Sakoda et al. disclose a method of transmitting a spread spectrum signal in which a product (44) of a lower bit rate signal (S40) and a second PN-code (45) equals the bit rate of a higher bit rate signal (S43), and in which a first PN-code sequence (47) is used to spread said product or a higher bit rate signal to a predetermined output chip rate (abstract).

b) Regarding claim 2, Sakoda et al. disclose a method of recovering a spread spectrum signal having one of a higher bit rate signal (S42 in Fig. 6) spread by a first PN-code sequence (45 in Fig. 6) and lower bit rate signal (S41 in Fig. 6) spread by the product of the first PN-code sequence (45 in Fig. 6) and a second PN code sequence (47 in Fig. 6), a product of the lower bit rate and the chip rate of the second PN-sequence equalling the higher bit rate (S44 in Fig. 6), comprising receiving (61 in Fig. 8) and demodulating (63 in Fig. 8; Col 12, L8-12) a spread spectrum signal, successively correlating in a first operation (64 in Fig. 8) the demodulated signal with the first PN-code sequence (65 in Fig. 8) and then in a second operation (66 in Fig. 8) with the second PN-code sequence (67 in Fig. 8) and determining (68 in Fig.8) if a higher bit rate signal is present by checking for the presence of a strong correlation peak in the output of the first operation and no correlation peak in the output of the second operation and if a lower bit rate signal is present by checking for the presence of at least a weak correlation peak in the output of the first operation and for the presence of a strong correlation peak in the output of the second operation (S66, in Fig. 8; Col 12, L22-56).

c) Regarding claim 7, Sakoda et al. disclose a spread spectrum communications system comprising a transmitting station (40 in Fig 6) for transmitting a signal having one of a higher bit rate (S42) and a lower bit rate (S41), the transmitting station comprising a source of a lower bit rate signal (S40), means for multiplying the lower bit rate signal by a second PN-code (45) sequence to give a product having a chip rate substantially equal to the bit rate of the higher bit rate signal (abstract), a source of the higher bit rate signal (S40), means for multiplying the higher bit rate signal (44 and 46), if present, or said product, if present, by a first PN-code sequence to give a spread spectrum signal (47) having a predetermined output chip rate signal (abstract), and at least one receiving station 60 in Fig. 8) having means for receiving and demodulating the spread spectrum signal (61, 62, and 63), first means for correlating the demodulated signal (64) with the first PN-code sequence (65), second means for correlating the output from the first mentioned correlating step (66) with the second PN-code sequence (67) and means for determining (S65, and 68) the presence of a higher bit rate signal by checking for a strong correlation peak in the output of said first means and no correlation peak in the output of said second means and for determining the presence of a lower bit rate signal by checking for at least a weak correlation peak in the output of said first means and a strong correlation peak in the output of said second means (Col 12, L22-56).

d) Regarding claim 8, Sakoda et al. disclose a spread spectrum receiver (60 in Fig. 8) for receiving at any one time a signal having a higher bit rate (S42 in Fig. 6) spread by a first PN-code sequence (45 in Fig. 6) and a signal having a lower bit rate (S41 in Fig. 6) which has been spread by the first PN-code sequence (45 in Fig. 6) and a second PN-code sequence (47 in Fig. 6), the product of the lower bit rate and the second PN-Code sequence equalling the higher bit rate (S44 in Fig. 6), the

receiver (60 in Fig. 8) comprising means for receiving and demodulating the spread spectrum signal (61, 62, and 63), first means for correlating the demodulated signal (64) with the first PN-code sequence (65), second means for correlating the output from the first mentioned correlating step (66) with the second PN-code sequence (67) and means for determining (S65, and 68) the presence of a higher bit rate signal by checking for a strong correlation peak in the output of said first means and no correlation peak in the output of said second means and for determining the presence of a lower bit rate signal by checking for at least a weak correlation peak in the output of said first means and a strong correlation peak in the output of said second means (Col 12, L22-56).

#### ***Allowable Subject Matter***

13. Claims 3-6, 9, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Yi Zheng whose telephone number is 703-305-8699. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-879-9306.

**Any response to this action should be mailed to:**



Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Technology Center 2600 Customer Service  
Office whose telephone number is (703) 306-0377.

Eva Yi Zheng  
Examiner  
Art Unit 2634

February 25, 2004



**SHUWANG LIU**  
**PRIMARY EXAMINER**